

Features

- 24 V DC Output
- Four Amp Output
- UL listed for commercial fire applications
- Switched Power Output Control
- Charger for Sealed Lead Acid Batteries
- Power Supply Output Supervision
- Full Battery Lead Supervision
- Dip Switch Programmable Trouble Supervision
- On Board System Status LEDs visible through enclosure door

Description

The Radionics D9142F is a UL listed, 24 volt Auxiliary Power Supply for use in commercial fire alarm systems. It provides up to 4 amps of power for charging batteries and powering auxiliary or indicating devices. The system is housed in a red steel enclosure that is louvered for ventilation.

Switched Power Output Control

The D9142F Switched Output Control allows a remote device, using either a 12-24 V DC trigger voltage or a dry contact closure, to switch power on or off. Wiring the unit to switch power off allows it to remove power from magnetic door holders or other devices that must be de-energized during of a fire alarm. Wiring the unit to switch power on allows it to power indicating devices, emergency lighting, and other devices that must be powered in an alarm situation.

The D9142F has two system-status LEDs that are visible through cut-outs with the door closed. The green LED indicates the system has AC power. The red Trouble LED lights to indicate a power supply trouble condition.

Batteries

The D9142F enclosure has space for two 12 V, 7Ah batteries.

The built-in charger meets the battery manufacturer's charging recommendations.

The D9142F's Power Supply Supervision Circuit supervises the batteries for missing battery and low voltage (22-24 VDC) conditions. If it detects these conditions, it lights the Trouble LED and powers the Trouble Relay, which may be wired to sounders or lights.



Power Supply Supervision

A D1601 Transformer supplies power to the D9142F system.

The D9142F supervises all critical circuits of its power supply. Five trouble conditions can be individually identified. They are:

- AC Power Failure,
- On-board AC Fuse Failure,
- Power Output Fault,
- Battery Test Failure,
- Low, Missing, or Shorted Battery.

These conditions have outputs on the Trouble Output Connector and can be wired to a point or zone on the Control Communicator allowing individual identification by a central station.

The five conditions may be selected by dip switches to activate the Summary Trouble Relay. This relay may be used as a common trouble indicator, to enable a single supervised address to monitor the selected power supply trouble conditions. All selected conditions must be cleared before the Summary Trouble Relay returns to normal.

Installation

The D9142F is typically installed adjacent to the fire control panel. It is compatible with all Radionics panels listed for fire alarm applications. For longer standby times, a second battery enclosure may be needed.

The D9142F Power Supply is shipped in three separate boxes. The D9142M Power Supply Board, three wiring harnesses, and the installation instructions are in the first. The D8109L Louvered Enclosure, complete with lock and key set is in the second. The D1601 Transformer is in the third.

The Enclosure is wall-mounted and requires 1/2 inch clearance on all sides.

Enclosure Dimensions

Width: 16-1/4"
 Height: 16-1/4"
 Depth: 3-1/2"

Listings and Approvals

The D9142F is listed by Underwriters Laboratories for the following NFPA 72 Applications:

- Central Station
- Local
- Auxiliary
- Remote Station

California State Fire Marshal: 7315-0801:155

Architects and Engineers Specifications:

Fire Alarm System Power Supply

The contractor shall be responsible for determining power supply and standby battery requirements. The contractor shall furnish and install a Radionics D9142F 24 VDC Regulated Supply according to these plans and the attached specifications.

Installation, Warranty

Installation of the power system, wiring of indicating devices and signaling circuits shall be the responsibility of the installing company. Warranty on all components shall be for one year, subject to manufacturer's limitations.

Specifications: D9142 Power Supply

Power Input	120 V AC, 60 Hz, 360 V A
Power Output	4.0 A Max. , @ 27.6 V DC
Standby Output Current	Amps standby Max. Up to 4 amps depending on Configuration
Alarm Current	3 Amps Max.
DC Output, AC On	22.0 to 28.0 V DC
DC Output, AC Off	18.9 to 27.0 V DC
Low Battery Threshold	22.0 to 24.1 V DC
Low Battery Restoral	24.2 to 26.5 V DC
Battery Load Shed Threshold	18.9 to 20.5 V DC
Battery Load Shed Restoral	23.1 to 24.7 V DC
Summary Trouble Relay	Form C Rated at 2 A @ 24 V DC
Communications Header	Open Collector output Current sink 5 mA max.
Operating Temperature	32°F to 122°F
Humidity	85% Max. at 86°F Non-Condensing
Batteries	12 VDC, 7 Amphour to 38 Amphour Sealed Lead Acid
Compatible Panels	D7112, D8112, D9112 D9124, D10024
Stand-by current	110 mA
120 VAC Fuse Rating	Type 3 AG 4 Amp 250V SB RPN 57-01338-004
UL Listing	UL 1481: Power Supplies for Fire Alarm Systems

